



Approved for use through 12/30/00. OMB 0651-0033  
Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE  
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

**REISSUE APPLICATION DECLARATION BY THE INVENTORS**

Docket Number (optional)

100.047USR4

As a below named inventors, we hereby declare that:  
Our residences, post office addresses and citizenships are stated below next to our names.  
We believe we are the original, first and joint inventors of the subject matter which is described and claimed  
in patent number 5,852,651, granted December 22, 1998, and for which a  
reissue patent is sought of the invention entitled

**CELLULAR COMMUNICATIONS SYSTEM WITH SECTORIZATION**

the specification of which

☐ is attached hereto.

☒ was filed on December 22, 2000 as reissue application number 09/747,273  
and was amended on \_\_\_\_\_  
(If applicable)

We have reviewed and understand the contents of the above identified specification, including the claims, as  
amended by any amendment referred to above.

We acknowledge the duty to disclose information which is material to patentability as defined in 37 CFR 1.56.  
We verily believe the original patent to be wholly or partly inoperative or invalid, for the reasons described  
below. (Check all boxes that apply.)

☐ by reason of a defective specification or drawing.

☒ by reason of the patentee claiming more or less than he had the right to claim in the patent.

☐ by reason of other errors.

At least one error upon which reissue is based is described below: If the reissue is a broadening  
reissue, such must be stated with an explanation as to the nature of the broadening:

This reissue application is based on an error that the applicant and applicant's attorney failed to appreciate the full  
scope of the invention and thus claimed less subject matter than could have been claimed. The issued claims  
contain limitations that are not essential for practicing the broad teachings of the invention disclosed in the  
application. Thus, this reissue application is intended as a broadening reissue.

In one example of this error, Applicant failed to fully claim the manner in which RF signals are digitized and  
transmitted from a base station to a remote unit in the system. This error is demonstrated by comments made by  
an Examiner in a related application sharing the same specification. The Examiner indicated that:

the prior art fails to teach the combining of analog telephone signals prior to digitization of the  
signals for transmission over a digital transport link between a base station and remote  
antenna sites. (See, Notice of Allowance dated 10/17/1998 in US Serial No. 08/410,129).

However, in this related application, applicant failed to claim all the subject matter indicated by the Examiner as  
allowable. Thus, claims have been included in this reissue application that are directed to aspects of the  
digitization of signals for transmission between the base station and the remote unit.

Best Available Copy

PTO/SB/51 (10-00  
Approved for use through 12/30/00. OMB 0851-0033  
Patent and Trademark Office, U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

## (REISSUE APPLICATION DECLARATION BY THE INVENTOR, page 2)

Docket Number (Optional)

100.047USR4

All errors corrected in this reissue application arose without any deceptive intention on the part of the applicant. As a named inventor, we hereby appoint the following attorney(s) and/or agent(s) to prosecute this application and transact all business in the Patent and Trademark Office connected therewith.

Name	Registration	Name	Registration
Fogg, David N.	35,138	Polglaze, Daniel J.	39,801
Kelly, Mark D.	39,467	Ryan, Laura A.	P-49,055
Leffert, Thomas W.	40,697	Slifer, Russell D.	39,838
Lundberg, Scott V.	41,958	Walseth, Andrew C.	43,234
Myrum, Tod A.	42,922		

Correspondence Address: Direct all communications about the application to:

☒ Customer Number

27073

Customer Number

☒ Firm or  
Individual NameDavid N. Fogg  
FOGG SLIFER & POLGLAZE, P.A.

Address P.O. Box 581009

City Minneapolis

State

Minnesota

Zip

55458-1009

Country USA

Telephone

612-312-2200

Fax

612-312-2250

We hereby declare that all statements made herein of our own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine and imprisonment, or both, under 18 U.S.C. 1001, and that such willful false statements may jeopardize the validity of the application, any patent issuing thereon, or any patent to which this declaration is directed.

Full name of first inventor (given name, family name)

Larry G. Fischer

Inventor's signature



Date

8/13/01

Residence

Waseca, Minnesota

Citizenship

USA

Mailing Address

RR #4, Box 145, Waseca, Minnesota 56093

Full name of second joint inventor (given name, family name)

David S. Russell

Inventor's signature

Date

Residence

Minneapolis, Minnesota

Citizenship

USA

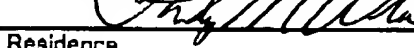
Mailing Address

2117 Dudley Avenue, St. Paul, Minnesota 55108

Full name of third joint inventor (given name, family name)

Philip M. Wala

Inventor's signature



Date

8/14/01

Residence

Waseca, Minnesota

Citizenship

USA

Mailing Address

504 14<sup>th</sup> Avenue NW, Waseca, Minnesota 56093☒ Additional joint inventors are named on separately numbered sheets attached hereto.

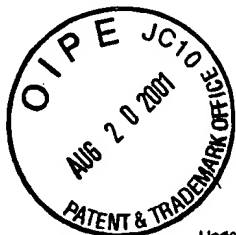
PTO/SB/51 (10-00

Approved for use through 12/30/00. OMB 0661-0033

Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

REISSUE APPLICATION DECLARATION		ADDITIONAL INVENTOR(S) Supplemental Sheet Page 1 of 3	
Full name of fourth joint inventor (given name, family name) Charles R. Ratliff			
Inventor's signature		Date	
Residence		Citizenship USA	
Mailing Address			
Full name of fifth joint inventor (given name, family name)			
Inventor's signature		Date	
Residence		Citizenship	
Mailing Address			
Full name of sixth joint inventor (given name, family name)			
Inventor's signature		Date	
Residence		Citizenship	
Mailing Address			
Full name seventh joint inventor (given name, family name)			
Inventor's signature		Date	
Residence		Citizenship	
Mailing Address			
Full name eighth joint inventor (given name, family name)			
Inventor's signature		Date	
Residence		Citizenship	
Mailing Address			
Full name of ninth joint inventor (given name, family name)			
Inventor's signature		Date	
Residence		Citizenship	
Mailing Address			



PTO/SB/61 (10-00)  
Approved for use through 12/30/00. OMB 0651-0033  
Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

# REISSUE APPLICATION DECLARATION BY THE INVENTORS

Docket Number (optional)  
100.047USR4

As a below named inventors, we hereby declare that:  
Our residences, post office addresses and citizenships are stated below next to our names.  
We believe we are the original, first and joint inventors of the subject matter which is described and claimed  
in patent number 5,852,651, granted December 22, 1998, and for which a  
reissue patent is sought of the invention entitled

CELLULAR COMMUNICATIONS SYSTEM WITH SECTORIZATION

the specification of which

☐ is attached hereto.

☒ was filed on December 22, 2000 as reissue application number 09/747,273  
and was amended on \_\_\_\_\_  
(if applicable)

We have reviewed and understand the contents of the above identified specification, including the claims, as  
amended by any amendment referred to above.  
We acknowledge the duty to disclose information which is material to patentability as defined in 37 CFR 1.56.  
We verily believe the original patent to be wholly or partly inoperative or invalid, for the reasons described  
below. (Check all boxes that apply.)

☐ by reason of a defective specification or drawing.

☒ by reason of the patentee claiming more or less than he had the right to claim in the patent.

☐ by reason of other errors.

At least one error upon which reissue is based is described below: If the reissue is a broadening  
reissue, such must be stated with an explanation as to the nature of the broadening:

This reissue application is based on an error that the applicant and applicant's attorney failed to appreciate the full  
scope of the invention and thus claimed less subject matter than could have been claimed. The issued claims  
contain limitations that are not essential for practicing the broad teachings of the invention disclosed in the  
application. Thus, this reissue application is intended as a broadening reissue.

In one example of this error, Applicant failed to fully claim the manner in which RF signals are digitized and  
transmitted from a base station to a remote unit in the system. This error is demonstrated by comments made by  
an Examiner in a related application sharing the same specification. The Examiner indicated that:  
the prior art fails to teach the combining of analog telephone signals prior to digitization of the  
signals for transmission over a digital transport link between a base station and remote  
antenna sites. (See, Notice of Allowance dated 10/17/1996 in US Serial No. 08/410,129).

However, in this related application, applicant failed to claim all the subject matter indicated by the Examiner as  
allowable. Thus, claims have been included in this reissue application that are directed to aspects of the  
digitization of signals for transmission between the base station and the remote unit.

Best Available Copy

PTO/SB/51 (10-00

Approved for use through 12/30/00. OMB 0651-0033

Patent and Trademark Office, U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

## (REISSUE APPLICATION DECLARATION BY THE INVENTOR, page 2)

Docket Number (Optional)

100.047USR4

All errors corrected in this reissue application arose without any deceptive intention on the part of the applicant. As a named inventors, we hereby appoint the following attorney(s) and/or agent(s) to prosecute this application and transact all business in the Patent and Trademark Office connected therewith.

Name	Registration	Name	Registration
Fogg, David N.	35,138	Polglaze, Daniel J.	39,801
Kelly, Mark D.	39,467	Ryan, Laura A.	P-49,055
Leffert, Thomas W.	40,697	Slifer, Russell D.	39,838
Lundberg, Scott V.	41,958	Waiseth, Andrew C.	43,234
Myrum, Tod A.	42,922		

Correspondence Address: Direct all communications about the application to:

☒ Customer Number

27073

Customer Number

☒ Firm or Individual NameDavid N. Fogg  
FOGG SLIFER & POLGLAZE, P.A.

Address P.O. Box 581009

City	Minneapolis	State	Minnesota	Zip	55458-1009
Country	USA	Telephone	612-312-2200	Fax	612-312-2250

We hereby declare that all statements made herein of our own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine and imprisonment, or both, under 18 U.S.C. 1001, and that such willful false statements may jeopardize the validity of the application, any patent issuing thereon, or any patent to which this declaration is directed.

Full name of first inventor (given name, family name)

Larry G. Fischer ✓

Inventor's signature

Date

Residence  
Waseca, MinnesotaCitizenship  
USAMailing Address  
RR #4, Box 145, Waseca, Minnesota 56093

Full name of second joint inventor (given name, family name)

David S. Russell ✓

Inventor's signature

Date

Residence  
Minneapolis, MinnesotaCitizenship  
USAMailing Address  
2117 Dudley Avenue, St. Paul, Minnesota 55108

Full name of third joint inventor (given name, family name)

Philip M. Wala ✓

Inventor's signature

Date

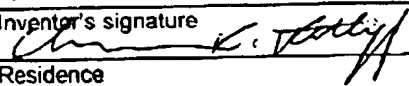
Residence  
Waseca, MinnesotaCitizenship  
USAMailing Address  
504 14<sup>th</sup> Avenue NW, Waseca, Minnesota 56093☒ Additional joint inventors are named on separately numbered sheets attached hereto.

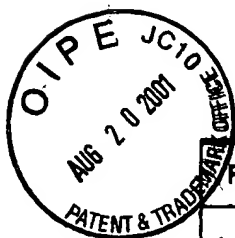
PTO/SB/51 (10-00)

Approved for use through 12/30/00. OMB 0651-0033

Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

REISSUE APPLICATION DECLARATION		ADDITIONAL INVENTOR(S) Supplemental Sheet Page 1 of 3	
Full name of fourth joint inventor (given name, family name) Charles R. Ratliff			
Inventor's signature 		Date 08/17/2001	
Residence Madison, Georgia		Citizenship USA	
Mailing Address 1470 Boones Bridge Road, Madison, Georgia 30650			
Full name of fifth joint inventor (given name, family name)			
Inventor's signature		Date	
Residence		Citizenship	
Mailing Address			
Full name of sixth joint inventor (given name, family name)			
Inventor's signature		Date	
Residence		Citizenship	
Mailing Address			
Full name seventh joint inventor (given name, family name)			
Inventor's signature		Date	
Residence		Citizenship	
Mailing Address			
Full name of eighth joint inventor (given name, family name)			
Inventor's signature		Date	
Residence		Citizenship	
Mailing Address			
Full name of ninth joint inventor (given name, family name)			
Inventor's signature		Date	
Residence		Citizenship	
Mailing Address			



Approved for use through 12/30/00. CMB 0651-0033  
 Patent and Trademark Office, U.S. DEPARTMENT OF COMMERCE  
 Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

# REISSUE APPLICATION DECLARATION BY THE INVENTORS

Docket Number (optional)

100.047USR4

As a below named inventors, we hereby declare that:  
 Our residences, post office addresses and citizenships are stated below next to our names.  
 We believe we are the original, first and joint inventors of the subject matter which is described and claimed  
 in patent number 5,852,651, granted December 22, 1998, and for which a  
 reissue patent is sought of the invention entitled

CELLULAR COMMUNICATIONS SYSTEM WITH SECTORIZATION

the specification of which

☐ is attached hereto.

☒ was filed on December 22, 2000 as reissue application number 09/747,273

and was amended on \_\_\_\_\_

(If applicable)

We have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment referred to above.  
 We acknowledge the duty to disclose information which is material to patentability as defined in 37 CFR 1.56.  
 We verily believe the original patent to be wholly or partly inoperative or invalid, for the reasons described below. (Check all boxes that apply.)

☐ by reason of a defective specification or drawing.

☒ by reason of the patentee claiming more or less than he had the right to claim in the patent.

☐ by reason of other errors.

At least one error upon which reissue is based is described below. If the reissue is a broadening reissue, such must be stated with an explanation as to the nature of the broadening:

This reissue application is based on an error that the applicant and applicant's attorney failed to appreciate the full scope of the invention and thus claimed less subject matter than could have been claimed. The issued claims contain limitations that are not essential for practicing the broad teachings of the invention disclosed in the application. Thus, this reissue application is intended as a broadening reissue.

In one example of this error, Applicant failed to fully claim the manner in which RF signals are digitized and transmitted from a base station to a remote unit in the system. This error is demonstrated by comments made by an Examiner in a related application sharing the same specification. The Examiner indicated that

the prior art fails to teach the combining of analog telephone signals prior to digitization of the signals for transmission over a digital transport link between a base station and remote antenna sites. (See, Notice of Allowance dated 10/17/1998 in US Serial No. 08/410,129).

However, in this related application, applicant failed to claim all the subject matter indicated by the Examiner as allowable. Thus, claims have been included in this reissue application that are directed to aspects of the digitization of signals for transmission between the base station and the remote unit.

Best Available Copy

PTO/SB/01 (10-00)

Approved for use through 12/30/00. OMB 081-0033  
Patent and Trademark Office, U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

## (REISSUE APPLICATION DECLARATION BY THE INVENTOR, page 2)

Docket Number (Optional)

100.047USR4

All errors corrected in this reissue application arose without any deceptive intention on the part of the applicant. As a named inventor, we hereby appoint the following attorney(s) and/or agent(s) to prosecute this application and transact all business in the Patent and Trademark Office connected therewith.

Name	Registration	Name	Registration
Fogg, David N.	35,138	Polglaze, Daniel J.	39,801
Kelly, Mark D.	39,467	Ryan, Laura A.	P-49,035
Leftert, Thomas W.	40,897	Silfer, Russell D.	39,838
Lundberg, Scott V.	41,958	Walseeth, Andrew C.	43,234
Myrum, Tod A.	42,922		

Correspondence Address: Direct all communications about the application to:

☒ Customer Number

27073

Customer Number

☒ Firm or Individual NameDavid N. Fogg  
FOGG SILFER & POLGLAZE, P.A.

Address P.O. Box 581008

City Minneapolis

State

Minnesota

Zip

55458-1008

Country USA

Telephone

612-312-2200

Fax

612-312-2250

We hereby declare that all statements made herein of our own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine and imprisonment, or both, under 18 U.S.C. 1001, and that such willful false statements may jeopardize the validity of the application, any patent issuing thereon, or any patent to which this declaration is directed.

Full name of first inventor (given name, family name)

Larry G. Flecher

Inventor's signature

Date

Residence

Waseca, Minnesota

Citizenship

USA

Mailing Address

RR #4, Box 145, Waseca, Minnesota 56093

Full name of second joint inventor (given name, family name)

David S. Russell

Inventor's signature

Date

Aug 20, 2001

Residence

Minneapolis, Minnesota

Citizenship

USA

Mailing Address

2117 Dudley Avenue, St. Paul, Minnesota 55108

Full name of third joint inventor (given name, family name)

Phillip M. Wala

Inventor's signature

Date

Residence

Waseca, Minnesota

Citizenship

USA

Mailing Address

504 14<sup>th</sup> Avenue NW, Waseca, Minnesota 56099☒

Additional joint inventors are named on separately numbered sheets attached hereto.



AUG-20-2001 21:11

612 312 2250

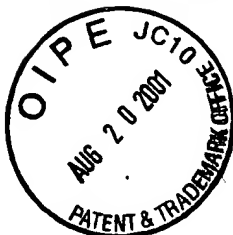
PTO/SR/51 (10-00)

Approved for use through 12/30/00. OMB 0651-0033  
Patent and Trademark Office, U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1996, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

REISSUE APPLICATION DECLARATION		ADDITIONAL INVENTOR(S) Supplemental Sheet Page 1 of 3	
Full name of fourth joint inventor (given name, family name) Charles R. Ratliff			
Inventor's signature		Date	
Residence		Citizenship USA	
Mailing Address			
Full name of fifth joint inventor (given name, family name)			
Inventor's signature		Date	
Residence		Citizenship	
Mailing Address			
Full name of sixth joint inventor (given name, family name)			
Inventor's signature		Date	
Residence		Citizenship	
Mailing Address			
Full name seventh joint inventor (given name, family name)			
Inventor's signature		Date	
Residence		Citizenship	
Mailing Address			
Full name of eighth joint inventor (given name, family name)			
Inventor's signature		Date	
Residence		Citizenship	
Mailing Address			
Full name of ninth joint inventor (given name, family name)			
Inventor's signature		Date	
Residence		Citizenship	
Mailing Address			

TOTAL P.09



PTO/SB/53 (10-00)  
 Approved for use through 12/30/2000. OMB 0651-0093  
 Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE  
 Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

# **REISSUE APPLICATION: CONSENT OF ASSIGNEE; STATEMENT OF NON-ASSIGNMENT**

Docket Number (Optional)

100.047USR4

This is part of the application for a reissue patent based on the original patent identified below.

Name of Patentee(s) Larry G. Fischer, Charles R. Ratliff, Philip M. Wala, and David S. Russell

Patent Number

5,852,851

Date Patent Issued

December 22, 1998

Title of Invention

CELLULAR COMMUNICATIONS SYSTEM WITH SECTORIZATION

1. ☒ Filed herein is a certificate under 37 CFR 3.73(b). (Form PTO/SB/96)

2. ☐ Ownership of the patent is in the inventor(s), and no assignment of the patent is in effect.

One of boxes 1 or 2 above must be checked. If multiple assignees, complete this form for each assignee. If box 2 is checked, skip the next entry and go directly to "Name of Assignee".

The written consent of all assignees and inventors owning an undivided interest in the original patent is included in this application for reissue.

The assignee(s) owning an undivided interest in said original patent is/are  
 and the assignee(s) consents to the accompanying application for reissue.

ADC Telecommunications, Inc.,  
 13625 Technology Drive  
 Eden Prairie, MN 55344-2252

Name of assignee/inventor (if not assigned)

ADC Telecommunications, Inc.

Signature

Date

08/15/01

Typed or printed name and the title of person  
 signing for assignee (if assigned)

Jeffrey D. Pflaum  
 Vice President, General Counsel & Corporate Secretary

Best Available Copy

PTO/SB/96(6-88)

Approved for use through 09/30/2000. OMB 0851-0031  
Patent and Trademark Office, U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

**STATEMENT UNDER 37 CFR 3.73(b)**Applicant/Patent Owner: ADC TELECOMMUNICATIONS, INC.Application No./Patent No.: 299,159/5,852,651 Filed/Issue Date: 8-31-94/12-22-98Entitled: CELLULAR COMMUNICATIONS SYSTEM WITH SECTORIZATIONADC Telecommunications, Inc. a corporation

(Name of Assignee)

(Type of Assignee, e.g., corporation, partnership, university, government agency, etc.)

states that it is:

1. ☒ the assignee of the entire right, title, and interest; or
2. ☐ an assignee of an undivided part interest

in the patent application/patent identified above by virtue of either:

- A. ☒ An assignment from the inventor(s) of the patent application/patent identified above. The assignment was recorded in the Patent and Trademark Office at Reel 7058, Frame 0199, or for which a copy thereof is attached.

OR

- B. ☐ A chain of title from the inventor(s), of the patent application/patent identified above, to the current assignee as shown below:

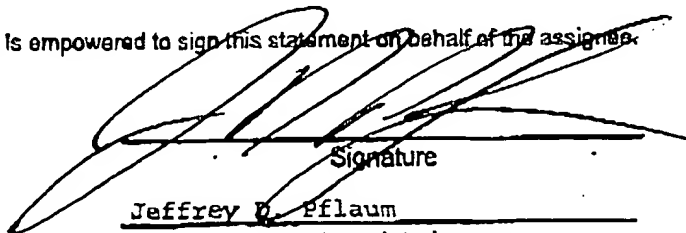
1. From: \_\_\_\_\_ To: \_\_\_\_\_  
The document was recorded in the Patent and Trademark Office at  
Reel \_\_\_\_\_, Frame \_\_\_\_\_, or for which a copy thereof is attached.
2. From: \_\_\_\_\_ To: \_\_\_\_\_  
The document was recorded in the Patent and Trademark Office at  
Reel \_\_\_\_\_, Frame \_\_\_\_\_, or for which a copy thereof is attached.
3. From: \_\_\_\_\_ To: \_\_\_\_\_  
The document was recorded in the Patent and Trademark Office at  
Reel \_\_\_\_\_, Frame \_\_\_\_\_, or for which a copy thereof is attached.

[ ] Additional documents in the chain of title are listed on a supplemental sheet.

- [ ] Copies of assignments or other documents in the chain of title are attached.

**[NOTE:** A separate copy (i.e., the original assignment document or a true copy of the original document) must be submitted to Assignment Division in accordance with 37 CFR Part 3, if the assignment is to be recorded in the records of the PTO. See MPEP 302-302.8]

The undersigned (whose title is supplied below) is empowered to sign this statement on behalf of the assignee.

08/15/01  
Date
  
Signature  
Jeffrey D. Pflaum  
Typed or printed name

Vice President, General Counsel &  
Title